

### **REMARKS**

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of March 31, 2008 is respectfully requested.

By this Amendment, claims 1-20 have been cancelled and new claims 21-36 have been added and are currently pending in the application. No new matter has been added by these amendments.

The entire specification and abstract have been reviewed and revised. Due to the number of revisions, the amendments to the specification and abstract have been incorporated into the attached substitute specification and abstract. For the Examiner's benefit, a marked-up copy of the specification and abstract indicating the changes made thereto is also enclosed. No new matter has been added by the revisions. Entry of the substitute specification is thus respectfully requested.

On page 2 of the Office Action, the Examiner objected to claims 2-5 due to informalities. In particular, the Examiner indicated that the phrase "characterized in that" recited in claims 2-5 does not follow standard U.S. practice. As indicated above, claims 1-20 have been cancelled and replaced with new claims 21-36. It is noted that the new claims do not include the phrase "characterized in that." Therefore, it is respectfully submitted that the Examiner's objection is not applicable to the new claims.

On page 2 of the Office Action, the Examiner rejected claims 8, 9 and 15-20 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. In particular, the Examiner indicated that the claims recite a computer program, but do not recite that the program is tangibly embodied in a manner so as to be executable. In this regard, it is noted that new claims 24, 27, 30, 33, 35 and 36 recite a computer program, and also recite that the program is recorded on a computer-readable medium. Accordingly, the claimed invention is tangibly embodied in a manner so as to be executable, and it is therefore respectfully submitted that the Examiner's rejection under 35 U.S.C. § 101 is not applicable to the new claims.

On pages 2-5 of the Office Action, the Examiner rejected claims 1-4, 6, 8, 9 and 15-20 under 35 U.S.C. § 102(b) as being anticipated by Bittner et al. (Exact Regional Visibility using Line Space Partitioning). However, as indicated above, claims 1-20 have been cancelled and replaced with new claims 21-36. For the reasons discussed below, it is respectfully submitted

that the new claims are clearly not anticipated by Bittner.

New independent claim 21 recites a method for determining a region of visibility between at least a first reflector and a second reflector. The method of claim 21 includes representing the first reflector, the second reflector and a third reflector in a system of coordinates (x, y, z), and carrying out an affine transformation of the system of coordinates (x, y, z). Further, claim 21 recites determining a region of visibility of the second reflector in relation to the first reflector as a set of parameters of straight lines that link a generic point of the first reflector with a generic point of the second reflector, and determining a region of visibility of the second and third reflectors as seen from the first reflector. The method of claim 21 also includes *tracing a single semi-straight line in the system of coordinates whose parameters are comprised in overlapping regions of visibility starting from the first reflector, and determining a succession order of intersections between the second and third reflectors based on the single semi-straight line*. Further, claim 21 recites assigning a portion of the overlapping regions of visibility to the reflector having priority in the succession order, wherein the regions of visibility represent a visibility diagram.

Bittner discloses a method of constructing a regional occlusion tree (ROT) for a group of occluders. In particular, Bittner discloses that a regional occlusion tree can be constructed by extending two lines from the ends of the reflector, and that the regional occlusion tree can then be used to determine how the occluders are visible from the source region. However, Bittner does not disclose a method which includes *tracing a single semi-straight line in the system of coordinates whose parameters are comprised in overlapping regions of visibility starting from the first reflector, and determining a succession order of intersections between the second and third reflectors based on the single semi-straight line*, as required by independent claim 21. Rather, Bittner only discloses extending two lines from the ends of a reflector so as to construct a regional occlusion tree, and determining the visibility of the occluders based on the regional occlusion tree, and therefore does not disclose tracing a single semi-straight line in the system of coordinates whose parameters are comprised in overlapping regions of visibility starting from the first reflector, and determining a succession order of intersections between the second and third reflectors based on the single semi-straight line, as required by independent claim 21. Therefore, it is respectfully submitted that independent claim 21 is not anticipated by Bittner.

On pages 5-9 of the Office Action, the Examiner rejected claims 5, 7, 10-14, 18 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Foco et al. (Sound Specialization Based on Fast Beam Tracing in the Dual Space) in view of Bittner.

In this regard, it is first noted that the present application has an effective U.S. filing date of September 6, 2004, and the Foco reference has a publication date of September 8-11, 2003. Therefore, Foco does not constitute prior art under 35 U.S.C. § 102(b) as it was not published more than one year prior to the filing date of the present application. However, Foco potentially constitutes prior art under 35 U.S.C. § 102(a) as a reference published prior to September 6, 2004. However, Applicants note that a claim for priority under 35 U.S.C. § 119 was previously filed along with the U.S. application, which claims the priority date of Italian Patent Application No. MI2003A 001719, filed on September 8, 2003, and that the Examiner has acknowledged receipt of the certified copies of the priority documents.

Pursuant to 37 CFR 1.55(a)(4), a translation of the original application and a statement that the translation of the certified copy is accurate have been submitted along with this response in order to perfect the claim of priority. Therefore, it is respectfully submitted that the present application is entitled to the benefit of the filing date of September 8, 2003. Although the earliest possible publication date of the Foco reference and the priority date of the present application are both September 8, 2003, it is noted that the Foco reference was not published before the priority date of the present application, and therefore Foco does not constitute prior art.

Therefore, it is respectfully submitted that independent claim 21, as well as claims 22-36 which depend therefrom, are clearly allowable over the prior art of record.

In addition, the Examiner's attention is directed to the dependent claims which further define the present invention over the prior art. For example, claim 31 depends from claim 21, and recites that the method further includes *determining a beam tree of beams of rays on the reflectors based on the determined regions of visibility*. As indicated above, Bittner only discloses the determining of a regional occlusion tree, and does not disclose the determining of a beam tree, as required by claim 31. Accordingly, it is respectfully submitted that the limitations of claim 31 are not disclosed by the applied prior art.

In view of the foregoing amendments and remarks, it is respectfully submitted that the

present application is clearly in condition for allowance. An early notice to that effect is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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